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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,394	09/01/2004	Heru Prasanta Wijaya	53225/DBP/R130	1425
23363 7590 11/26/2007 CHRISTIE, PARKER & HALE, LLP PO BOX 7068 PASADENA, CA 91109-7068			EXAMINER WU, IVES J	
			ART UNIT 1797	PAPER NUMBER
			MAIL DATE 11/26/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/506,394

Applicant(s)

WIJAYA, HERU PRASANTA

Examiner

Ives Wu

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-15 is/are rejected.
- 7) ☒ Claim(s) 2,3 and 16-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

(1). Applicant's Request-for-Continued Examination (RCEX), Amendments and Remarks filed on 09/28/2007 have been received.

Claims 1-10 are amended. Claims 11-18 are new claim.

An Office Action in response to RCEX is presented in the following.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

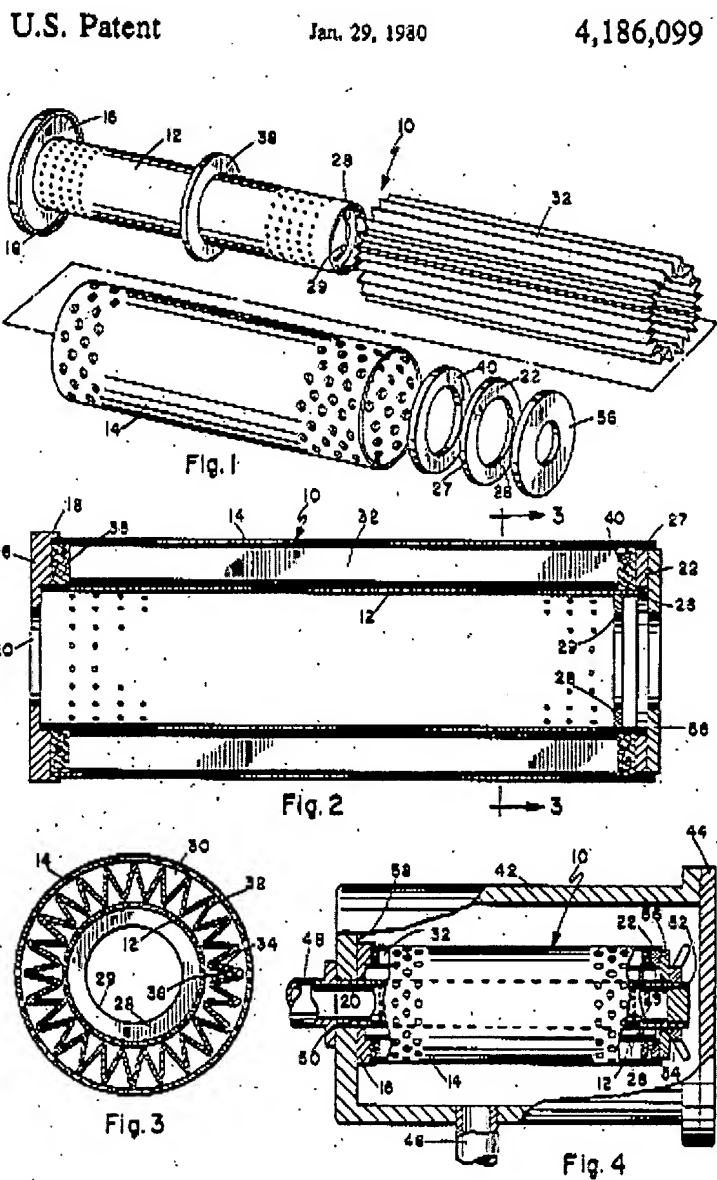
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(2). **Claims 11-14** are rejected under 35 U.S.C. 102(b) as being anticipated by Henschel, Jr. et al (US04186099):

As to a generally cylindrical filtering medium; an inner mesh interior of filtering medium; a lower binder interconnecting the filtering medium with the inner mesh; an upper binder interconnecting the filtering medium with inner mesh; a perforated plate exterior of filtering medium defining an outer housing of air filter; a lower housing portion covering the lower binder and coupled to a lower portion of the perforated plate; and an upper housing portion covering the upper binder and coupled to an upper portion of the perforated plate in an air filter for internal combustion engine in **independent claim 11**, Henschel, Jr. et al (US04186099) discloses filter assembly with paper cartridge (Title). A consumer rebuildable filter cartridge for mounting in a fluid filter chamber in a fluid flow path includes inner (**interior inner mesh**) and outer perforated (**exterior perforated plate**) tubular members mounted coaxially on a fixed end cap (**lower housing**) to form an annular chamber. A filter element of pleated sheet filter material (**cylindrical filtering medium**) is formed in a tubular construction and fitted into the annular space defined between the inner and outer tubular members and is sealed at each end by suitable resilient seal washers (**upper, lower binders**), compressed between the fixed end cap and a movable end cap (**upper housing**). The inner and outer tubular members forms support structure

for supporting the tubular paper filter element and permits the removal and replacement of such filter elements (Abstract). Further illustrated in the following Figures:



As to at least one of upper and lower housing portions is detachably coupled to the perforated plate in **claim 12**, Henschel, Jr. et al (US04186099) disclose, it is therefore desirable that a suitable filtering cartridge be available which eliminates this expense by permitting the

filter material to be replaced independently of the filter cartridge support member (Col. 1, line 29-32), which reads on the requirements of instant claim.

As to filtering medium, the inner mesh, the upper binder and the lower binder together defining a unitary structure in **claim 13**, and unitary structure to be replaceable independent of perforated plate in **claim 14**, Henschel, Jr. et al (US04186099) disclose, the primary aspect of a filter cartridge is constructed to have a support structure which may be disassembled for replacing the filtering material of the cartridge (Col. 1, line 45-48). Therefore, it would have the flexibility to form a unitary structure and replaceable as claimed.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

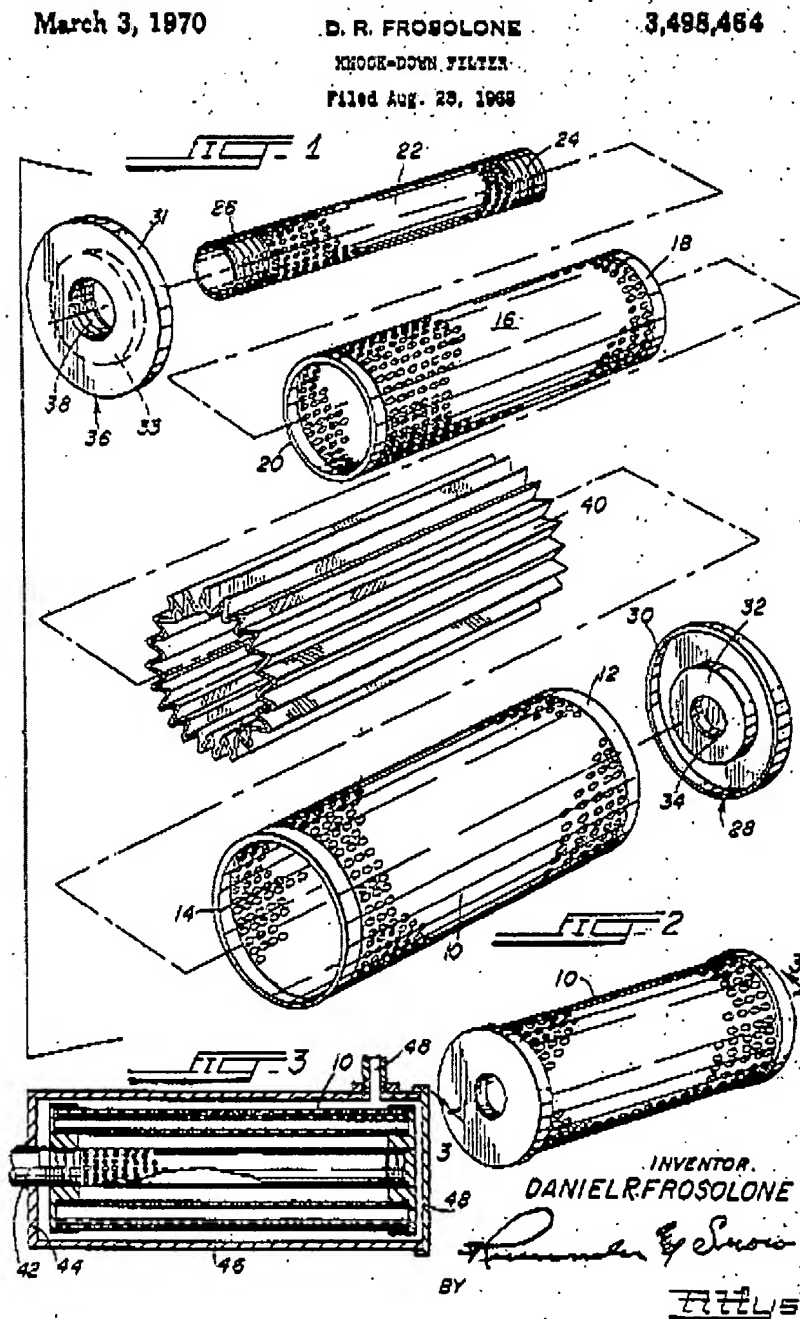
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(3). **Claims 1, 4, 6-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Frosolone (US03498464) in view of Engel et al (US04720292).

As to parts of a filtering medium and inner mesh equipped with lower rubber and upper rubber which functions as a binder as well as stabilizer for the filtering medium and its consistent shape in knocked-down air filter for internal combustion engine, a detachable lower housing, a perforated plate, an inner mesh and an upper housing in **independent claim 6**, Frosolone (US03498464) discloses knock-down filter (Title). As shown in the Figures below, which

includes filter medium 40 and intermediate tube shell 16 (inner mesh), outer tube shell 10 (perforated plate), cap 28 (upper housing), cap 36 (detachable lower housing).



Frosolone (US03498464) does not teach the upper, lower rubber which functions as a binder as well as stabilizer for filter medium and its consistent shape as claimed.

However, Engel et al (US04720292) **teach** the cylindrical air filter (Title).the end caps 25 and 17 are preferably made from an elastomer such as a urethane foam material having relatively soft, rubber-like consistency so that it is capable of functioning as a seal or gasket material (Col. 3, line 35-39; Col. 2, line 65-68).

The advantage of rubber end caps is to function as a seal or gasket material (Col. 3, line 37-38).

Therefore, it would have been obvious to install rubber caps disclosed by Engel et al for the knock-down filter of Frosolone in order to attain the above-cited advantage.

As to allow for replacement of filter medium and the inner mesh without replacing the perforated plate in **independent claim 6**, as shown in Figures above, which includes the features as claimed.

As to perforated plate defining an outer housing of filter that is connected to the upper and to the lower housing in **independent claim 6**, as shown in the Figures above, which reads on the limitation of instant claim.

As to air filter for combustion engine in **independent claim 6**, the disclosure of Frosolone, Engel et al meet the requirements of the present claim both in terms of the components to be assembled and their knock-down structure. It is reasonable to presume that the knock-down filter of reference would fulfill the same utility as air filter for combustion engine as presently claimed in light of their similarities. The burden is shifted to applicants to establish that the knock-down air filter of present claims is not the same as or obvious as that set forth by the prior art reference.

As to parts of a filtering medium, lower housing, perforated plate, inner mesh and upper housing being assembled into an air filter by means of locker in **independent claim 6**, thread-locking systems in **claim 8**, Froscolone (US03498464) discloses an inner tube shell 22 with threads 26 and 24 to partially threaded to the bore of upper, lower caps.

As to filter medium comprising a plurality of upwardly extending folds made from filtering paper or other substances where rubbers are attached on upper and lower parts in order to stabilize the shape of the filtering medium in **claim 7**, Frosolone (US03498464) discloses the accordion pleated filter paper 40 to be generally of tubular shape and of a length equal to the

length of cylinders 10 and 16 and nests therebetween when the cartridge is assembled (Col. 2, line 22-25, Figure 1 above).

As to parts of a filtering medium and inner mesh engaged by lower rubber and upper rubber acting as a binder so that filtering medium and inner mesh engaged integrally in knocked-down air filter for internal combustion engine in **independent claim 1**, the disclosure of Frosolone, Engel et al is incorporated herein by reference, the most subject matters as currently claimed, have been recited in applicant's claim 6 and have been discussed therein.

As to the reinforcing pile in knocked-down filter in **independent claim 1**, Frosolone (US03498464) discloses inner tube shell 22 in the Figures above, which reads on the limitation of instant claim.

As to detachable lower housing, perforated plate and reinforcing pile, upper housing being able to be assembled in **independent claim 1**, as shown in Figures above, which reads on the limitation of instant claim.

As to parts of filter medium and inner mesh being combined with lower housing, perforated plate, reinforcing pile and upper housing to be formed into a air filter by means of locker in **independent claim 1**, and thread-locking system in **claim 4**, Frosolone (US03498464) discloses short threaded pipe nipples 24 and 26 to be welded at the distal ends of the shell 22 as shown in the Figures above, the cover plate or cap is also provided with collar 32 having axial threaded bore 34 for the reception of threaded nipple 24 of the cylinder 22 (Col.2, line 12-14). In assembling the cartridge rthe threaded nipple 26 of the inner tube 22 is partially threaded into the bore 38 (Col. 2, line 30-31), which reads on the limitation of instant claim.

As to the replacement of the filtering medium and inner mesh without replacing the perforated plate and reinforcing pile in **independent claim 1**, as shown in the Figures above, which include the features as claimed.

As to perforated plate defining an outer housing of filter that is connected to the upper and to the lower housing in **independent claim 1**, as shown in the Figures above, which reads on the limitation of instant claim.

As to knocked-down air filter in internal combustion engine **independent claim 1**, the disclosure of Frosolone, Engel et al meets the requirements of current claim in terms of the



components and design, it is reasonable to presume that the cylindrical air filter of prior arts would be a knocked-down air filter in combustion engine as well in view of their structure similarities. The burden is shifted to applicant to establish that the knocked down air filter of present claim is not the same as or obvious as that set forth by the references.

(4). **Claims 5, 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Frosolone (US03498464) in view of Engel et al (US04720292), further in view of Oke (US006280491B1).

As to lower housing, upper housing engaged by a reinforcing means in the form of spiral in **claims 5 and 9**, Frosolone **does not teach** the reinforcing means in the form of spiral.

However, Oke (US006280491B1) **teaches** the cartridge filter with a coil spring positioned within the cartridge filter as shown in Figure 10 and 10(a).

The advantage of coil spring is due to the fact that the coil engages between the pleats there is little or no wear on the pleats (Col. 4, line 44-45). Further evidenced by Butler (US006102978A) that the preformed metal coil has end portions to retain the end caps in place on the filter media (Abstract, line 3-7).

Therefore, it would have been obvious at time of the invention to install the coil spring disclosed by Oke in the cylindrical filter of Frosolone in order to obtain the above-mentioned advantage.

(5). **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Frosolone (US03498464) in view of Engel et al (US04720292), further in view of Heilmann et al (US20010020512A1).

As to limitation of **claim 10**, Frosolone (US03498464) discloses pleated paper filter 40 in Figures above. Frosolone **does not teach** the pleated filter medium to be reinforced by a plastic reinforcing substance wound as a ring around the filtering medium as claimed.

However, Heilmann et al (US20010020512A1) **teach** a pleated filter element, at least one adhesive track or reinforcing member is arranged (Abstract). In one preferred embodiment, these reinforcing members are formed by applying a continuous bead of a hot melt adhesive across the filter element transversely to the direction of the pleats ([0019], line 5-8).

The advantage of applying the hot melt adhesives in such a way is for reinforcement as the pleated filter is bended to a curved configuration (Abstract).

Therefore, it would have been obvious at time of the invention to apply a continuous hot melt adhesives transversely to the pleated filter disclosed by Heilmann et al for the pleated paper filter of Frosolone in order to obtain the above-mentioned advantage.

(6). **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Henschel, Jr. et al (US04186099) in view of Oke (US006280491B1).

As to a reinforcing pile interior of filtering medium in **claim 15**, Henschel, Jr. et al **do not teach** the interior reinforcing pile.

However, Oke (US006280491B1) **teaches** the cartridge filter with a coil spring positioned within the cartridge filter as shown in Figure 10 and 10(a).

The advantage of coil spring is due to the fact that the coil engages between the pleats there is little or no wear on the pleats (Col. 4, line 44-45). Further evidenced by Butler (US006102978A), that the preformed metal coil has end portions to retain the end caps in place on the filter media (Abstract, line 3-7).

Therefore, it would have been obvious at time of the invention to install the coil spring disclosed by Oke in the cylindrical filter of Henschel, Jr. et al in order to obtain the above-mentioned advantage.

#### *Allowable Subject Matter*

(7). **Claims 2-3 and 16-18** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Response to Arguments*

Applicant's arguments with respect to claims 1 and 6 have been considered but are moot in view of the new ground(s) of rejection.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

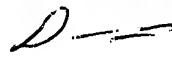
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Examiner: Ives Wu

Art Unit: 1797

Date: November 15, 2007

DUANE SMITH  
PRIMARY EXAMINER

  
11-21-07